



## OFFICE OF PUBLIC INSTRUCTION

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### Grade 7 Math Performance/Achievement Descriptors

<b>Advanced</b>	<p>Students at this level demonstrate a comprehensive and in-depth understanding of rigorous subject matter</p> <ul style="list-style-type: none"><li>• Identify the least common multiple of a pair of natural numbers</li><li>• Evaluate a numerical expression with multiple operations and fractions</li><li>• Solve a multi-step problem involving rate, time and distance</li><li>• Extend a repeating number sequence more than 3 terms beyond those given</li><li>• Identify the linear expression that generalizes a given arithmetic sequence</li><li>• Determine whether a pair of rectangles are congruent or similar</li><li>• Locate vertices of a rectangle on the coordinate plane</li><li>• Estimate the volume of a cylinder given its dimensions in nonstandard units</li><li>• Compare the relative volumes of rectangular prisms</li><li>• Interpret a box-and-whisker plot</li><li>• Identify a strategy to collect data that is most representative of a group</li><li>• Calculate a compound probability from a table of data</li></ul>
<b>Proficient</b>	<p>Students at this level demonstrate a solid understanding of challenging subject matter</p> <ul style="list-style-type: none"><li>• Use a proportion to solve a problem involving fractions, decimals or percents</li><li>• Order rational numbers in different forms</li><li>• Identify the solution to a linear equation</li><li>• Write an equation with two variables to describe a real-world situation</li><li>• Identify the image of a polygon after a transformation</li><li>• Identify a pair of transformations applied to a figure that produces a given image</li><li>• Estimate equal units in different systems of measure</li><li>• Calculate the area of a quadrilateral</li><li>• Use the relationships among the radius, diameter and circumference of a circle to solve a problem</li></ul>
<b>Nearing Proficiency</b>	<p>Students at this level demonstrate a partial understanding of subject matter</p> <ul style="list-style-type: none"><li>• Write numbers in words or standard form to trillions</li><li>• Express ratios as percents</li><li>• Perform multiple operations on decimal numbers to solve a problem</li><li>• Identify a linear graph that describes an arithmetic sequence given a rule in words</li><li>• Identify the coordinates of the <math>x</math>-intercept of a line graphed on the coordinate plane</li><li>• Determine the change in a dependent variable of a single operation function given a change in the independent variable</li><li>• Identify a single transformation applied to a figure that produces a given image</li><li>• Apply the Triangle Sum Theorem to find a missing angle measure</li><li>• Determine the measures of central tendency of a set of data displayed in a line plot</li><li>• Interpret a circle graph</li></ul>

<b>Novice</b>	<p>Students at this level demonstrate a minimal understanding of subject matter</p> <ul style="list-style-type: none"> <li>• Evaluate a numerical expression involving exponents</li> <li>• Apply a single operation to decimal numbers to solve a problem</li> <li>• Describe in words a rule given a arithmetic sequence</li> <li>• Evaluate a linear algebraic expression for a given value</li> <li>• Associate a net with a sketch of its prism</li> <li>• Identify the side view of a three dimensional figure drawn in perspective</li> <li>• Estimate the lengths of figures in a scale drawing</li> <li>• Create a bar graph for a given set of data</li> <li>• Interpret a bar graph</li> <li>• Make a prediction given the probability of an outcome</li> </ul>
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